

REMARKS

Claims 1-14 are currently pending in the patent application. For the reasons and arguments set forth below, Applicant respectfully submits that the claimed invention is allowable over the cited references.

In the instant Office Action dated August 8, 2007, the following items are noted in the specification: "AD" in the title should be changed to read analog-to-digital; and a request is made to add section headings. The following rejection is listed: claims 1-2, 5, and 7 stand rejected under 35 U.S.C. 102(b) over Signell *et al.* (U.S. Patent No. 6,028,546). Claims 3, 4, and 6 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claims and any intervening claims.

In response to the potential allowability of claims 3, 4 and 6, Applicant has rewritten claims 3 and 6 in independent form as new claims 8 and 12 respectively, which incorporate limitations of the base and any intervening claims. Applicant submits that claims 8 and 12, as well as claims 9-11 and 13-14 that depend from claim 8 or claim 12, are in condition for allowance.

Applicant has amended the title of the invention to replace "AD" with "ANALOG-TO-DIGITAL" as indicated on page 2 of this paper.

Regarding the request to add section headings, Applicant respectfully declines to add section headings to the specification because the indicated suggestions in 37 C.F.R. § 1.77(b) are not statutorily required for filing a non-provisional patent application under 35 USC § 111(a), but per 37 C.F.R. § 1.51(d) are only guidelines that are suggested for applicant's use. They are not mandatory, and when Rule 77 was amended in 1996 (61 FR 42790, Aug. 19, 1996), Bruce A. Lehman, Assistant Secretary of Commerce and Commissioner of Patents and Trademarks, stated in the Official Gazette:

"Section 1.77 is permissive rather than mandatory. ... 1.77 merely expresses the Office's preference for the arrangement of the application elements. The Office may advise an applicant that the application does not comply with the format set forth in 1.77, and suggest this format for the applicant's consideration; however, the Office will not require any application to comply with the format set forth in 1.77."

In view of the above, Applicant prefers not to add section headings.

Applicant respectfully traverses the Section 102(b) rejection of claims 1-2, 5, and 7 because the cited portions of the Signell reference do not correspond to the claimed invention which includes, for example, aspects directed to a cascade of dual residual converter stages. Applicant respectfully submits that the relied upon portion of the Signell reference only teaches a single-differential residue signal. *See, e.g.*, Signell at Col. 16 lines 58 *et seq.* More specifically, both $V^p(i)$ and $V^n(i)$ are individual components that together form a single residue signal, with V^p presumably representing the positive voltage and V^n the negative voltage. Accordingly, the Signell reference does not correspond to the claim limitations directed toward two residue signals. Notwithstanding, in an effort to facilitate prosecution, Applicant has amended claim 1 to clarify aspects of the claimed invention directed to dual residue signals. *See also* Applicant's specification at paragraphs 1-7. Applicant submits that the relied upon portions of the Signell reference do not teach or suggest two residue signals, each relative to a different reference/quantization level. Applicant notes that claim 7 recites that the residue signals are balanced signals, whereas Signell teaches a single-differential residue signal as discussed above. Accordingly, the rejections are improper and Applicant requests that they be withdrawn.

In view of the remarks above, Applicant believes that each of the rejections has been overcome and the application is in condition for allowance. Should there be any remaining issues that could be readily addressed over the telephone, the Examiner is asked to contact the agent overseeing the application file, Peter Zawilski, of NXP Corporation at (408) 474-9063 (or the undersigned).

Please direct all correspondence to:

Corporate Patent Counsel
NXP Intellectual Property & Standards
1109 McKay Drive; Mail Stop SJ41
San Jose, CA 95131

CUSTOMER NO. 65913

By: 

Name: Robert J. Crawford

Reg. No.: 32,122

651-686-6633

(NXPS.324PA)